

Designing an online activity for collaborative language learning

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Engaging students when learning new vocabulary, building an environment that allows for collaboration and teamwork and providing approaches towards learning via problem solving is not an easy feat in teaching a second language. To have an activity that incorporates these three strategies in one for both face-to-face and geographically dispersed students can be challenging. This paper describes how an online activity in Moodle linked to the glossary module allows students to possibly learn vocabulary more efficiently, quicker and in a more engaging way.

Keywords: Collaborative learning, Moodle, language learning.

Introduction

The purpose of this paper is to analyse the design rationale, development and implementation of picture-based online activities for second language (L2) vocabulary learning. The paper provides a short overview of research on effective learning processes and describes online activities for L2 vocabulary acquisition that implement visual images as learning tools. Most students find many vocabulary-teaching methods are at worst painful (Krashen, 1989). Common questions addressed in research on L2 acquisition are concerned with efficiency of traditional teaching methods, long-term retention of vocabulary taught, as well as student motivation and engagement.

Alavi (1994) proposes that there are three attributes for effective learning processes in the area of cognitive learning theory:

1. Active learning and construction of knowledge
2. Cooperation and teamwork in learning
3. Learning via problem solving.

A strategy that covers all of these three attributes is collaborative learning. The term collaborative learning was first introduced by Piaget (1926) and later progressed by psychologists Johnson and Johnson (1975) and Slavin (1987). The benefits of collaborative learning, as summarized by Cecez-Kecmanovi and Webb (2000), are: better motivation (Johnson et al., 1981), higher test scores and level of achievement (Dansereau, 1983), development of high level thinking (Slavin, 1987) and higher student satisfaction (Sharan, 1990). With the introduction of technology in education, the term Computer-Supported Collaborative Learning (CSCL) was fashioned by O'Malley (1995). It can be defined as "the learning sciences concerned with studying how people can learn together with the help of computers" (Stahl et al, 2006). Resta and Laferriere (2007, p. 67) describe it as "interactions take place among students using computer networks to enhance the learning environment [...] to support asynchronous and synchronous communication between students on-campus as well as students who are geographically distributed".

Case study

As one of the few Australian Universities, Macquarie University has a Department of Russian Studies. Students of Russian wish to have more interesting and engaging activities to learn new vocabulary outside their classroom environment as opposed to traditional pen and paper drills. Highest priority is given to quick and efficient acquisition of vocabulary to allow for conversation in L2 at early stages. This part of language acquisition is perceived to be the hardest by students, as it requires perseverance, patience and time.

This paper introduces a game-like online activity that was designed to facilitate efficient vocabulary learning. The implementation of Moodle, the new Learning Management System (LMS) at Macquarie University in

Semester 1, 2012 created an opportunity to make changes to the current course design. The new online activity was designed to bring together various multimedia elements essential for vocabulary learning, such as sound, images and texts and helps students to better recall meanings, pronunciation and grammatical properties of foreign words. For instance, the student will be able to hear the pronunciation of the words outside the class, as it automatically links to text-to-speech online service. Further, the online activity corrects their errors instantaneously and provides immediate feedback on their learning progress.

It uses the common principle of matching foreign L2 words with familiar L1 words to help memorising a foreign language vocabulary. It resembles a flashcard-learning pattern as newly added words circulate through the exercises. Oxford and Crookall (1990) discovered that flashcards is one of the most practised techniques by students to memorise new foreign vocabulary.

The online-activity allows choosing between different types of exercises: word to translation or explanation of grammatical properties, word to image/picture, word to audio/pronunciation and image/picture to audio/pronunciation. The exercises are directly linked to the glossary module, so whenever a new entry is added to the glossary it will show up immediately in the exercise.



Figure 1: Screenshot of online-activity

The activity presented in this paper then feeds from the information entered in the glossary. The glossary in Moodle enables students to add words, their definitions and images and all entries are visible to all unit members. It also allows for students to comment on each other's contribution to the glossary, permitting them to leave feedback, request further information about a word or even correct the spelling. The convener of the unit is able to decide if he wishes to approve the words entry in the glossary or if all words should be automatically made available to all students. One of the benefits of adding words to the glossary is that if a word is listed it appears on other pages within that Moodle unit. These words are automatically highlighted and when clicked the user is directed to the glossary entry, allowing the user to review the meaning of the word. Entering words to the glossary is simple, as it only requires a word or concept, a description and the option of including an image.

The use of multimedia in second language learning, in particular the presentation of information in various formats (text, audio, graphics, animation, video), has become the subject of much debate amongst researchers and educators. Concerns often raised are whether learning foreign languages would be more effective when visual images are employed. Various studies have been undertaken to assess the impact of visual images on language learning (e.g. Carpenter & Olson, 2012; Chun & Plass, 1996b; Herron, Hanley & Cole, 1995; Omaggio, 1979; Yeh & Wang, 2003). Computer-assisted language learning literature mostly focuses on the impact of pictorial glossing on incidental (e.g. through massive reading or listening) second language vocabulary acquisition rather than on intentional vocabulary learning. Commonly held views are that visual images facilitate reading comprehension (Chun & Plass, 1996b; Herron, Hanley & Cole, 1995; Omaggio, 1979) and that the presentation of foreign words with their pictures, in addition to native language translation, has a positive effect on vocabulary growth for language learners (Oxford & Crookall, 1990; Chun & Plus, 1996a; Kost, Foss & Lenzini, 1999). The explanation for this effect is that lexical terms coded with visual as well as verbal modes will be memorised and retrieved from the memory better than lexical terms coded with only one verbal mode (Chun & Plus, 1996a). There are also suggestions that pictures are easier to perceive than a native language translation, therefore, the use of pictures can facilitate accurate memory predictions (Carpenter & Olson, 2012) and images of familiar objects can facilitate the learning of language (Deno, 1968).

Vocabulary presentation in the glossary includes the audio of word pronunciation and visual aids such as pictures of objects to cater for different learning preferences. The fact that the sound of the word is immediately presented with the new word offers another benefit (verbal mode) to memorise it. In the design of this activity, we have followed and incorporated proven learning strategies to engage students when learning a language. The activity engages students by providing them with control over what they wish to learn. In this case, it is the students who populate the glossary with new items. If this is organised as a class activity, new words are quickly added to the glossary, and are available for practice to all students. It has been shown that when the learner has the control of the instructional material the learner reports a greater positive attitude (Morrison, Ross, and Baldwin, 1992), an increased motivation and greater learning (Cordova and Lepper, 1996). This activity may evoke a sense of control and direction over the activity. The activity was designed to randomly select new words from the glossary and mix them with the old ones, however, students can choose if they wish to practise new words, or revise the old ones first and progress at a later stage.

This arrangement can save valuable time for the teacher as students create their own practice material while collaborating and peer-reviewing each other's entries. This approach gives students many opportunities to practice using new vocabulary, whilst requiring minimal input from teaching staff, apart from organisational coordination. Teachers can limit their involvement to merely proofreading and checking their students' input in the glossary if they wish to do so. Further, this activity will indicate to the teacher what is important to the learner. Moreover, it is very likely that the process of engaging students in populating the glossary with new words in itself will help students memorize the new words better. With this activity, we shift to a more dynamic and user-driven process that characterizes a game-like setting, rather than a single-trial activity (such as completing a worksheet).

Stanley (2007) completed research with regards to issues of implementing the Moodle glossary module in class. He listed the following issues. First of all, it was stated that it was crucial to explain to students how the glossary works and how to use it. A short manual including screenshots or a short instructional video can help. Second, students did not have a clear understanding of what was expected from them. Students did not realize that glossary entries were to be done on a regular basis, for instance, a few entries a week, so the whole group could benefit from the definitions given by fellow students. However, most students left it until the end of the semester to make their glossary entries. Major reason for this behavior was that students did not know where to begin and which words to define as the lecturer kept the task very open. Clearer instructions have to be conveyed to students in the use of glossary to assure benefits to all students and show value of the activity.

A few other problems can be expected when implementing the online activity linked to the glossary in teaching. If wished to be used in a day-to-day classroom environment, students must be provided with computers or laptops and Internet access. A major issue is how to make students see the value of this activity if they would use it. In this case, all students of the unit have to be encouraged to participate in populating the glossary from the beginning on.

Discussion and conclusions

These new online activities were designed to bring together various multimedia elements essential for vocabulary learning, such as images, sound and text, and to help students memorise meanings, pronunciation and grammatical properties of foreign words. We expect that these activities will enhance learning outcomes and improve the current practice resources. This tool aims to empower students and provide them with a tool that would help two-fold: give them an active role in learning through the student-generated glossary.

This paper explores three attributes of cognitive learning theory: Active learning and construction of knowledge, cooperation and teamwork in learning, and learning via problem solving. This activity encourages students to actively learn and construct knowledge by providing them with a platform, the glossary module in Moodle, which allows students to construct their knowledge by manipulating and structuring information. Since the activity relies on students entering new words that they have acquired, cooperation and teamwork in learning is also present. Individual students will be exposed to words that their colleagues view as important and can provide social support to each other. The online-activity offers a challenging problem-solving situation by asking students to pair a word with the correct counterpart, be it an image, a definition or the translated word. Therefore, using this activity as a whole may have a positive impact on the learning process of students.

Collaborative learning embodies all of the attributes above and the benefits of this approach are well researched. While they were initially developed for the Russian language, they are intended to be adapted to virtually every language taught at Macquarie University. We endeavor to establish the Russian unit as a leading subject in this

climate of change by responding to its students needs and by introducing new methods of delivery. Apart from developing this new technology, research will be conducted to investigate the effectiveness of this online activity.

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